[redacted] [redacted]

FILE 'CAPLUS, WPIDS, MEDLINE, BIOSIS' ENTERED AT 14:35:59 ON 18 FEB 2004

L1 2826 S BIOACTIVE GLASS OR (BIO? ACTIVE GLASS) OR (GLASS (5A) (ANTIMI
L2 589212 S WOUND OR WOUNDS OR SCAR OR SCARS OR BURN OR BURNS OR DRESSING
L3 36 S L1 (100A) L2
L4 30 DUP REM L3 (6 DUPLICATES REMOVED)

L1 2826 SEA BIOACTIVE GLASS OR (BIO? ACTIVE GLASS) OR (GLASS (5A)
(ANTIMICROBIAL? OR ANTIBACTERIAL? OR BACTERICID? OR BIOCID?))
L2 589212 SEA WOUND OR WOUNDS OR SCAR OR SCARS OR BURN OR BURNS OR
DRESSING# OR BANDAGE#
L3 36 SEA L1 (100A) L2
L4 30 DUP REM L3 (6 DUPLICATES REMOVED)

=> d 1-30 bib ab kwic

L4 ANSWER 1 OF 30 MEDLINE on STN
AN 2003565400 IN-PROCESS
DN PubMed ID: 14643606
TI Development and characterisation of silver-doped **bioactive glass**-coated sutures for tissue engineering and **wound** healing applications.
AU Blaker J J; Nazhat S N; Boccaccini A R
CS Department of Materials and Centre for Composite Materials, Centre for Tissue Engineering and Regenerative Medicine, Imperial College London, Prince Consort Road, London SW7 2BP, UK.
SO Biomaterials, (2004 Mar-Apr) 25 (7-8) 1319-29.
Journal code: 8100316. ISSN: 0142-9612.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20031216
Last Updated on STN: 20040109
AB A novel silver-doped bioactive glass powder (AgBG) was used to coat resorbable Vicryl (polyglactin 910) and non-resorbable Mersilk surgical sutures, thereby imparting bioactive, antimicrobial and bactericidal properties to the sutures. Stable and homogeneous coatings on the surface of the sutures were achieved using an optimised aqueous slurry-dipping technique. Dynamic mechanical analysis (DMA) was used to investigate the viscoelastic parameters of storage modulus and tandelta and thermal transitions of the as-received and composite (coated) sutures. The results generally showed that the bioactive glass coating did not affect the dynamic mechanical and thermal properties of the sutures. The in vitro bioactivity of the sutures was tested by immersion in simulated body fluid (SBF). After only 3 days of immersion in SBF, bonelike hydroxyapatite formed on the coated suture surfaces, indicating their enhanced bioactive behaviour. Resorbable sutures with bioactive coatings as fabricated here, in conjunction with 3-D textile technology, may provide attractive materials for producing 3-D scaffolds with controlled porosities for tissue engineering applications. The bactericidal properties imparted by the Ag-containing glass coating open also new opportunities for use of the composite sutures in wound healing and body wall repair.
TI Development and characterisation of silver-doped **bioactive glass**-coated sutures for tissue engineering and **wound** healing applications.

L4 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:173543 CAPLUS
DN 138:191876
TI Antimicrobial, anti-inflammatory, wound-healing and disinfecting silicate glass and use thereof
IN Fechner, Joerg Hinrich; Zimmer, Jose
PA Schott Glas, Germany; Carl-Zeiss-Stiftung
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003018498	A1	20030306	WO 2002-EP9217	20020817
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,				

[redacted] [redacted]

UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10156577 A1 20030528 DE 2001-10156577 20011120
DE 10213630 A1 20030313 DE 2002-10213630 20020327
PRAI DE 2001-10141116 A 20010822
DE 2001-10156577 A 20011120
DE 2002-10213630 A 20020327

AB The glass contains SiO2 30-95, Na2O 0-40, K2O 0-40, Li2O 0-40, CaO 0-35, MgO 0-10, Al2O3 0-10, P2O5 0-15, B2O3 1-5, NaF 0-10, LiF 0-10, KF 0-10, CaF2 0-10, Ag2O 0-5, MgF2 0-10, Fe2O3 0-2, and XIy 0-10 wt.% (X = Li, Na, K, Rb, Cs, Be, Mg, Ca, Sr, Ba, Ag, Zn; y = 1, 2); whereby the sequence of XIy >10 ppm. A calcium sodium silicate glass showed very good antibacterial activity against E. coli, P. aeruginosa, S. aureus, C. albicans and A. niger.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 1309-37-1, Iron oxide, uses 7681-11-0, Potassium iodide, uses 7681-49-4, Sodium fluoride, uses 7681-82-5, Sodium iodide, uses 7783-40-6, Magnesium fluoride 7783-96-2, Silver iodide 7787-53-3, Beryllium iodide 7789-17-5, Cesium iodide 7789-23-3, Potassium fluoride 7789-24-4, Lithium fluoride, uses 7789-75-5, Calcium fluoride, uses 7790-29-6, Rubidium iodide 10102-68-8, Calcium iodide 10139-47-6, Zinc iodide 10377-51-2, Lithium iodide 10377-58-9, Magnesium iodide 10476-86-5, Strontium iodide 13718-50-8, Barium iodide 20667-12-3, Silver oxide
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing and disinfecting silicate glass and use thereof)

IT 1303-86-2, Boron oxide, uses 1305-78-8, Calcia, uses 1309-48-4, Magnesia, uses 1313-59-3, Sodium oxide, uses 1314-56-3, Phosphorus pentaoxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 12057-24-8, Lithium oxide, uses 12136-45-7, Potassium oxide, uses
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing and disinfecting silicate glass and use thereof)

L4 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:173541 CAPLUS
DN 138:191875
TI **Antimicrobial,** anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof
IN Fechner, Joerg Hinrich; Zimmer, Jose
PA Schott Glas, Germany; Carl-Zeiss-Stiftung
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003018496	A1	20030306	WO 2002-EP9220	20020817

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,

[redacted] [redacted]

PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10156577	A1	20030528	DE 2001-10156577	20011120
DE 10213630	A1	20030313	DE 2002-10213630	20020327
DE 10213632	A1	20030313	DE 2002-10213632	20020327

PRAI DE 2001-10141116 A 20010822
DE 2001-10156577 A 20011120
DE 2002-10213630 A 20020327
DE 2002-10213632 A 20020327

AB The glass powder contains SiO2 20-80, Na2O 0-40, K2O 0-40, Li2O 0-40, CaO 0-40, MgO 0-40, Al2O3 0-40, P2O5 0-1, B2O3 0-40, ZnO 0-10 wt.%, and trace elements and/or refining agents; whereby Na2O + K2O + Li2O + CaO + MgO 15-80 wt.%. A calcium sodium silicate glass showed very good antimicrobial activity against E. coli, P. aeruginosa, S. aureus, C. albicans, and A. niger after 14 days.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI **Antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof

IT Anti-inflammatory agents
Antimicrobial agents
(**antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof as)

IT Antiperspirants
Cosmetics
Deodorants
Food
Lacquers
Medical goods
Paints
Scouring agents
(**antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof in)

IT Plastics, uses
Polymers, uses
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(**antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof in)

IT Silicate glasses
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(calcium sodium silicate; **antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof)

IT Medical goods
(hygienic materials, paper hygienic materials; **antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof for)

IT Skin, disease
(irritation, treatment; **antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof for)

IT **Wound** healing
(treatment; **antimicrobial**, anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof for)

IT 7440-66-6, Zinc, uses 7681-11-0, Potassium iodide, uses 7681-49-4, Sodium fluoride, uses 7681-82-5, Sodium iodide, uses 7783-40-6, Magnesium fluoride 7787-49-7, Beryllium fluoride 7787-53-3, Beryllium

iodide 7789-23-3, Potassium fluoride 7789-24-4, Lithium fluoride, uses 7789-75-5, Calcium fluoride, uses 10102-68-8, Calcium iodide 10377-51-2, Lithium iodide 10377-58-9, Magnesium iodide
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing silicate **glass** and use thereof)

IT 12057-24-8, Lithium oxide, uses
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing silicate **glass** and use thereof)

IT 7440-22-4, Silver, uses 7440-50-8, Copper, uses
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof)

IT 1303-86-2, Boron oxide, uses 1305-78-8, Calcia, uses 1309-48-4, Magnesia, uses 1313-59-3, Sodium oxide, uses 1314-13-2, Zinc oxide, uses 1314-56-3, Phosphorus pentaoxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 12136-45-7, Potassium oxide, uses
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(calcium sodium silicate **glass; antimicrobial,** anti-inflammatory, **wound**-healing silicate **glass** powder and use thereof)

L4 ANSWER 4 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-532892 [50] WPIDS
DNC C2003-144101
TI Glass ceramic or powder based on alkali and/or alkaline earth silicate glass is used in masking or sun protection cosmetics or as antimicrobial, anti-inflammatory, wound-healing agent in e.g. deodorant, paint, medicine, food or detergent.
DC D13 D21 D22 D25 F09 G02 L01
IN FECHNER, J H; LEE, S; MITRA, I; SCHNABEL, R; ZIMMER, J
PA (ZEIS) SCHOTT GLAS; (ZEIS) ZEISS STIFTUNG CARL
CYC 100
PI WO 2003050052 A1 20030619 (200350)* DE 22p
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
DE 10161075 C1 20030821 (200357)
ADT WO 2003050052 A1 WO 2002-EP13889 20021207; DE 10161075 C1 DE 2001-10161075 20011212
PRAI DE 2001-10161075 20011212
AB WO2003050052 A UPAB: 20030805
NOVELTY - In glass ceramic (I), in which the original glass (II) comprises (in wt.%) 35-65% silica (SiO_2), 5-30% sodium oxide (Na_2O), 0-20% potassium oxide (K_2O), 5-30% calcium oxide (CaO), 0-10% magnesium oxide (MgO), 0-5% alumina (Al_2O_3), 2-10% phosphorus pentoxide (P_2O_5), 0-5% boron oxide (B_2O_3), 0.1-10% titanium oxide (TiO_2), the crystalline main phases comprise alkali-alkaline earth silicates, alkaline earth silicates and/or alkali silicates.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) (I) powder with particles finer than 100 microns ;

(2) Production of (I) powder by grinding a block or ribbon of (II) and then ceramizing the powder;

(3) Production of (I) powder by ceramizing a block or ribbon of (II) and then grinding the glass ceramic to powder.

USE - The glass ceramic (I) or (I) powder is used in cosmetic products for visual reduction of wrinkles and for protecting the skin from damaging UV radiation; and (I) and (I) powder with antimicrobial, anti-inflammatory and wound-healing actions are used in cosmetics, deodorants, paints, lacquers, medicinal products and preparations, paper hygiene, foods and detergents (all claimed).

ADVANTAGE - Unlike some existing bioactive bioceramics for medical applications, the present materials block UV radiation very efficiently. In some cases, they also give a definite scattering and reflection effect in the visible wavelength range. The original glass and glass ceramics also have a biocidal or at least biostatic action towards bacteria, fungi and viruses but are compatible with human skin and toxicologically harmless.

DESCRIPTION OF DRAWING(S) - The drawing shows the degree of spectral transmission of (1) undoped, (2) doped unceramized glass of the compositions shown in the example, for samples with a thickness (d) of (1a, 2a) 0.2 mm and (1b, 2b) 1.0 mm, and indicates the blocking of UV radiation by the doped glass ceramics (2a, 2b). (Drawing includes non-English language text).

Dwg.1/1

TT TT: GLASS CERAMIC POWDER BASED ALKALI ALKALINE EARTH SILICATE **GLASS** MASK SUN PROTECT COSMETIC **ANTIMICROBIAL** ANTI INFLAMMATION **WOUND** HEAL AGENT DEODORISE PAINT MEDICINE FOOD DETERGENT.

L4 ANSWER 5 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-481885 [45] WPIDS
DNC C2003-128621
TI Water-insoluble **antimicrobial** silicate **glass** or powder is used as **antimicrobial**, anti-inflammatory, deodorant, preservative and disinfectant e.g. in **wound** care, cosmetics, deodorant, preservation, paper hygiene product or food.
DC D13 D21 D22 G02 L01 P34
IN FECHNER, J H; ZIMMER, J
PA (ZEIS) SCHOTT GLAS; (ZEIS) ZEISS STIFTUNG CARL; (ZEIS) ZEISS STIFTUNG CARL T/A SCHOTT GLAS
CYC 100
PI WO 2003018495 A1 20030306 (200345)* DE 25p
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
DE 10141117 A1 20030313 (200345)
ADT WO 2003018495 A1 WO 2002-EP9219 20020817; DE 10141117 A1 DE 2001-10141117 20010822
PRAI DE 2001-10141117 20010822
AB WO2003018495 A UPAB: 20030716
NOVELTY - Water-insoluble antimicrobial silicate glass (A) has the following composition in wt.% on oxide basis: (SiO2) 20-70, (Na2O) 5-30, (K2O) 0-5, (P2O5) 1-15, (B2O3) 0-10, (CaO) 4-30, (AgO) 0-2, (ZnO) 0-8, (CuO) 0-5, (MgO) 0-8, (Al2O3) 0-7, (CeO2) 0-5, (Fe2O3) 0-2, with the sum of AgO, CuO and CeO2 over 10 ppm, preferably at least 100 ppm and under 8 wt.%.

DETAILED DESCRIPTION - Water-insoluble antimicrobial silicate glass (A) has the following composition in wt.% on oxide basis: silicon (SiO2) 20-70, sodium (Na2O) 5-30, potassium (K2O) 0-5, phosphorus (P2O5) 1-15,

boron (B2O3) 0-10, calcium (CaO) 4-30, silver (AgO) 0-2, zinc (ZnO) 0-8, copper (CuO) 0-5, magnesium (MgO) 0-8, aluminum (Al2O3) 0-7, cerium (CeO2) 0-5, iron (Fe2O3) 0-2, with the sum of AgO, CuO and CeO2 over 10 ppm, preferably at least 100 ppm and under 8 wt.%. An INDEPENDENT CLAIM is also included for a glass powder of a specified silicate glass with a particle size less than 100, 50, 20, preferably 5, especially 2 micrometer.

USE - The glass powder is used for producing an antimicrobial effect and optionally an anti-inflammatory effect, especially in wound care, cosmetic products and deodorants for preservation and optionally for preventing body odors or with an anti-inflammatory action, in paints, lacquers and plasters for preservation, optionally in conjunction with a film preservation, in paper hygiene products to prevent odor development or inflammation of the skin or in food for preservation and optionally disinfection (all claimed).

ADVANTAGE - In contrast to existing glasses, the present glasses, glass ceramics and glass powders are water-insoluble, i.e. only the surface exchanges ions by reaction with surrounding water. The glasses have a biocidal or biostatic action towards bacteria, fungi and viruses. They are compatible with human skin, toxicologically harmless and edible. Dwg.0/0

TI Water-insoluble **antimicrobial** silicate **glass** or powder is used as **antimicrobial**, anti-inflammatory, deodorant, preservative and disinfectant e.g. in **wound** care, cosmetics, deodorant, preservation, paper hygiene product or food.

TT TT: WATER INSOLUBLE **ANTIMICROBIAL** SILICATE **GLASS** POWDER **ANTIMICROBIAL** ANTI INFLAMMATION DEODORISE PRESERVE DISINFECT **WOUND** CARE COSMETIC DEODORISE PRESERVE PAPER HYGIENE PRODUCT FOOD.

L4 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:915821 CAPLUS

TI Development and characterisation of silver-doped **bioactive glass**-coated sutures for tissue engineering and **wound** healing applications

AU Blaker, J. J.; Nazhat, S. N.; Boccaccini, A. R.

CS Centre for Tissue Engineering and Regenerative Medicine, Department of Materials and Centre for Composite Materials, Imperial College London, Prince Consort Road, London, SW7 2BP

SO Biomaterials (2003), Volume Date 2004, 25(7-8), 1319-1329
CODEN: BIMADU; ISSN: 0142-9612

PB Elsevier Science Ltd.

DT Journal

LA English

AB A novel silver-doped bioactive glass powder (AgBG) was used to coat resorbable Vicryl (polyglactin 910) and non-resorbable Mersilk surgical sutures, thereby imparting bioactive, antimicrobial and bactericidal properties to the sutures. Stable and homogeneous coatings on the surface of the sutures were achieved using an optimized aq. slurry-dipping technique. Dynamic mech. anal. (DMA) was used to investigate the viscoelastic parameters of storage modulus and tan .delta. and thermal transitions of the as-received and composite (coated) sutures. The results generally showed that the bioactive glass coating did not affect the dynamic mech. and thermal properties of the sutures. The in vitro bioactivity of the sutures was tested by immersion in simulated body fluid (SBF). After only 3 days of immersion in SBF, bonelike hydroxyapatite formed on the coated suture surfaces, indicating their enhanced bioactive behavior. Resorbable sutures with bioactive coatings as fabricated here, in conjunction with 3-D textile technol., may provide attractive materials for producing 3-D scaffolds with controlled porosities for tissue engineering applications. The bactericidal properties imparted by the Ag-contg. glass coating open also new opportunities for use of the composite sutures in wound healing and body wall repair.

TI Development and characterisation of silver-doped **bioactive glass**-coated sutures for tissue engineering and **wound**

healing applications

L4 ANSWER 7 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-067785 [06] WPIDS
DNC C2003-017826
TI Bioactive glass is used as antimicrobial additive for polymers used e.g. in household, packaging, food processing, sealant, medical, sanitary, automobile or construction field or as coating or adhesive.
DC A60 D22 L01
IN FECHNER, J H; SCHNABEL, R; SCHNELL, R; ZIMMER, J
PA (ZEIS) SCHOTT GLAS; (ZEIS) ZEISS STIFTUNG CARL
CYC 100
PI WO 2002090278 A1 20021114 (200306)* DE 16p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
DE 10122262 A1 20021121 (200306)
ADT WO 2002090278 A1 WO 2002-EP4991 20020507; DE 10122262 A1 DE 2001-10122262 20010508
PRAI DE 2001-10122262 20010508
AB WO 200290278 A UPAB: 20030124
NOVELTY - Bioactive glass (I) as additive for polymers with antimicrobial action contains 40-90 wt.% silica (SiO2), 4-45 wt.% calcium oxide (CaO), 0-35 wt.% sodium oxide (Na2O, 2-16 wt.% phosphorus pentoxide (P2O5), 0-25 wt.% Ca fluoride (CaF2), 0-10 wt.% boron oxide (B2O3), 0-8 wt.% potassium oxide (K2O) and/or 0-5 wt.% magnesia (MgO).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included the following:

(1) Polymer (IIA) with antimicrobial action containing 1-30 wt.% (I) particles;

(2) Polymer (IIB) with antimicrobial action as carrier material for bioactive glass, which contains 30-90 wt.% (I);

(3) The use of (I) as antimicrobial polymer additive.

USE - The **bioactive glass** is used in the household, packaging, food processing, sealants, the medical, sanitary, automobile and construction fields and as plastics coating or adhesive (all claimed). It is useful in silicones used in the sanitary field, sealants, polyacrylates in baby bottles, gloves, catheters and **dressings** used in medicine, coatings, e.g. on handles or wash basins, brushes, e.g. toothbrushes, natural rubber and latex, e.g. mattresses. Polymers in which the glass is useful include PGA and LGA biodegradable polymers, polyamides, polycarbonates, polyesters, polyimides, polyureas, polyurethanes, organic fluoropolymers, polyacrylamides, polyacrylic acids, poly(meth)acrylates, polyolefins, (co)polystyrenes, polyvinyl esters and ethers, polyvinylidene chloride, vinyl polymers, polyoxymethylenes, polyaziridines, polyoxyalkylenes, polyethylenes, synthetic resins (alkyl, aminoplastics, epoxide, phenolic, unsaturated polyester resins), electrically conductive polymers, high-temperature polymers, inorganic polymers, polyphenylene oxide, silicones and biopolymers (collagen, fibrin, chitin, chitosan, cellulose, and its esters and ethers, enzymes, gelatin, natural resin, nucleic acids, polysaccharides, proteins, silk, starch, wool).

ADVANTAGE - Existing polymer additives imparting antibacterial and fungicidal properties usually contain small amounts of heavy metal ions or are organic compounds, which can cause allergic reactions and health problems. The present additive gives very good antibacterial and fungicidal action without harmful side effects.

Dwg.0/0

AB . . .
for bioactive glass, which contains 30-90 wt.% (I);

(3) The use of (I) as antimicrobial polymer additive.

USE - The **bioactive glass** is used in the household, packaging, food processing, sealants, the medical, sanitary, automobile and construction fields and as plastics coating. . . (all claimed). It is useful in silicones used in the sanitary field, sealants, polyacrylates in baby bottles, gloves, catheters and **dressings** used in medicine, coatings, e.g. on handles or wash basins, brushes, e.g. toothbrushes, natural rubber and latex, e.g. mattresses. Polymers. . .

L4 ANSWER 8 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-139274 [13] WPIDS
DNN N2003-110596 DNC C2003-035313
TI Porous scaffold material for filling in defect or hollow portion of bone, comprises sintered glass fibers.
DC A96 D22 L01 P34 P73
IN PIRHONEN, E M; PIRHONEN, E
PA (PIRH-I) PIRHONEN E M; (PIRH-I) PIRHONEN E
CYC 100
PI US 2002160175 A1 20021031 (200313)* 9p
FI 2001000873 A 20021027 (200313)
WO 2002087647 A1 20021107 (200313) EN
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
ADT US 2002160175 A1 US 2001-981676 20011016; FI 2001000873 A FI 2001-873 20010426; WO 2002087647 A1 WO 2002-FI351 20020425
PRAI FI 2001-873 20010426
AB US2002160175 A UPAB: 20030224
NOVELTY - A porous scaffold material comprises sintered glass or ceramic fibers.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) A method for making a scaffold comprising contacting glass and ceramic fibers together, and sintering the glass or ceramic fibers to produce a porous scaffold;and

(b) A method of promoting growth of bone comprising contacting bone with a porous scaffold formed by sintering together glass fibers and allowing the bone to grow into the porous scaffold.

USE - The scaffold material is for filling in a defect or hollow portion of bone and maintains the space. It is used for fabricating a carrier for bioactive agents, which can be anti-inflammatory agents, antibacterial agents, antiparasitic agents, antifungal agents, antiviral agents, anti-neoplastic agents, analgesic agents, anesthetics, vaccines, central nervous system agents, growth factors, hormones, antihistamines, osteoinductive, cardiovascular agent, anti-ulcer agents, bronchodilators, vasodilators, birth control agents, fertility enhancing agents, or polypeptides. The bioactive agent can be bone morphogenetic protein. (Claimed).

ADVANTAGE - The inventive material includes **bioactive glass** that has an excellent compatibility with the living body without causing foreign body rejection reaction, promotes early formation of new bone and unifies integrally with the growing hard tissue of the living body or bone regeneration. It includes **bioactive glass** fibers instead of glass microspheres, thus it has higher strength and greater porosity. It has less tensile forces on the **wound** margins and greater **wound** stability, and provides a faster **wound** healing when compared to the prior art.

DESCRIPTION OF DRAWING(S) - The drawing shows the inventive porous bioactive scaffold attached to a polymeric film and is used in reconstructing alveolar bone.

Dwg.1/4

AB . . .
enhancing agents, or polypeptides. The bioactive agent can be bone morphogenetic protein. (Claimed).

ADVANTAGE - The inventive material includes **bioactive glass** that has an excellent compatibility with the living body without causing foreign body rejection reaction, promotes early formation of new bone and unifies integrally with the growing hard tissue of the living body or bone regeneration. It includes **bioactive glass** fibers instead of glass microspheres, thus it has higher strength and greater porosity. It has less tensile forces on the **wound** margins and greater **wound** stability, and provides a faster **wound** healing when compared to the prior art.

DESCRIPTION OF DRAWING(S) - The drawing shows the inventive porous bioactive scaffold. . .

L4 ANSWER 9 OF 30 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:489105 BIOSIS
DN PREV200200489105
TI Composition and method for acceleration of wound and burn healing.
AU Greenspan, David C. [Inventor]; West, Jon K. [Inventor]
CS ASSIGNEE: USBiomaterials Corporation
PI US 6428800 August 06, 2002
SO Official Gazette of the United States Patent and Trademark Office Patents, (Aug. 6, 2002) Vol. 1261, No. 1. http://www.uspto.gov/web/menu/patdata.htm l. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DT Patent
LA English
ED Entered STN: 18 Sep 2002
Last Updated on STN: 18 Sep 2002
AB A method for treating **wounds** including contacting a **wound** with an effective **wound** healing amount of **bioactive glass** and topical antibiotic and composition for the accelerated healing of **wounds** and **burns** including particulates of **bioactive glass** and at least one topical antibiotic.
AB A method for treating **wounds** including contacting a **wound** with an effective **wound** healing amount of **bioactive glass** and topical antibiotic and composition for the accelerated healing of **wounds** and **burns** including particulates of **bioactive glass** and at least one topical antibiotic.

L4 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:369512 CAPLUS
DN 137:24277
TI Clinical evaluation of an enamel matrix protein derivative combined with a bioactive glass for the treatment of intrabony periodontal defects in humans
AU Sculean, Anton; Barbe, Giovanni; Chiantella, Giovanni C.; Arweiler, Nicole B.; Berakdar, Mohammad; Brecx, Michel
CS Department of Periodontology and Conservative Dentistry, University of Saarland, Homburg, Germany
SO Journal of Periodontology (2002), 73(4), 401-408
CODEN: JOPRAJ; ISSN: 0022-3492
PB American Academy of Periodontology
DT Journal
LA English
AB The purpose of the present study was to compare the treatment of deep intrabony defects with a combination of an enamel matrix protein deriv. (EMD) and a bioactive glass (BG) to BG alone. Twenty-eight patients with chronic periodontitis, each of whom displayed 1 intrabony defect, were randomly treated with a combination of EMD and BG or with BG alone. Soft

tissue measurements were made at baseline and at 1 yr following therapy. No differences in any of the investigated parameters were obsd. at baseline between the 2 groups. Healing was uneventful in all patients. At 1 yr after therapy, the sites treated with EMD and BG showed a redn. in mean probing depth (PD) from 8.07.+-.1.14 mm to 3.92.+-.0.73 mm and a change in mean clin. attachment level (CAL) from 9.64.+-.1.59 mm to 6.42.+-.1.08 mm (P <0.0001). In the group treated with BG, the mean PD was reduced from 8.07.+-.1.32 mm to 3.85.+-.0.66 mm and the mean CAL changed from 9.78.+-.1.71 mm to 6.71.+-.1.89 mm (P <0.0001). No statistically significant differences in any of the investigated parameters were obsd. between the test and control group. Within the limits of the present study, it can be concluded that both therapies led to significant improvements of the investigated clin. parameters, and the combination of enamel matrix deriv. and bioactive glass does not seem to addnl. improve the clin. outcome of the therapy.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Human
Regeneration, animal
Wound healing
(clin. evaluation of enamel matrix protein deriv. combined with **bioactive glass** for treatment of intrabony periodontal defects in humans)

L4 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2001:713825 CAPLUS
DN 135:262269
TI Biocompatible glass compositions and methods for repair of osseous defects and accelerated wound healing
IN Yang, Shih-liang S.
PA Unicare Biomedical, Inc., USA
SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U. S. 6,228,386.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001024662	A1	20010927	US 2001-814481	20010315
	US 6228386	B1	20010508	US 1999-298683	19990423
PRAI	US 1999-298683	A2	19990423		

AB Compns. useful for repairing osseous defects and healing of wounds and burns include particulate bioactive and biocompatible glass including 40 to 58 by wt. silica, 10 to 32 by wt. calcia, 10 to 32 by wt. soda, 2 to 10 by wt. phosphorus pentoxide and 0 to 8 by wt. silver oxide. The particles have a size distribution of: less than 500 .mu.. Methods for repairing osseous defects, healing wounds and burns utilizing such compns. are also provided.

IT Prosthetic materials and Prosthetics
(**bioactive glass**; biocompatible glass compns. for repair of osseous defects and accelerated **wound** healing)

IT **Antimicrobial** agents
Blood
Particle size distribution
Physiological saline solutions
Wound healing promoters
(biocompatible **glass** compns. for repair of osseous defects and accelerated **wound** healing)

L4 ANSWER 12 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:129875 CAPLUS
DN 134:168416
TI Injectable bioactive glass in a dextran suspension
IN Hench, Larry L.; West, Jon K.; Latorre, Guy; Wilson, June; Toreki,

William, III; Batich, Christopher
PA University of Florida Research Foundation, Inc., USA
SO U.S., 5 pp., Cont.-in-part of U. S. 5,840,290.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6190684	B1	20010220	US 1998-198114	19981123
	US 5840290	A	19981124	US 1996-657713	19960530
PRAI	US 1996-657713	A2	19960530		

AB The present invention relates to injectable suspensions of bioactive glass and dextran or a dextran deriv. for the repair of soft tissue or hard bone in mammals, esp. humans. In one embodiment, the dextran derivs. include free radical polymerizable groups, which can be polymd. following injection into a patient. Dextran of an av. mol. wt. of about 35,000-74,000 Daltons (3.5 g) was stirred into water for injection (5.0 mL) to form a viscous soln. and the soln. was then mixed with Bioglass 45S5 (5.0 cc), having a particle size of about 106-125 .mu.m to form a 50:50 suspension of uniform consistency. The suspension was sterilized and loaded into a 3 mL syringe fitted with a 35 mm, 18 gauge needle and injected into s.c. soft tissue of a mouse.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Skin, disease
(**scar**; injectable **bioactive glass** in
dextran suspension for repair of soft or hard tissues)

L4 ANSWER 13 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-624289 [72] WPIDS
DNN N2001-465100 DNC C2001-186130
TI Modified pharmaceutical depot for implantation in human or non-human animal comprises a coating of a biologically active and biocompatible glass, glass-ceramic or ceramic material.
DC A96 B07 D22 L01 P32
IN BATICH, C D; HARDT, N S; MAROTTA, J S
PA (UYFL) UNIV FLORIDA
CYC 1
PI US 6274159 B1 20010814 (200172)* 7p
ADT US 6274159 B1 Provisional US 1998-105982P 19981028, US 1999-429396 19991028
PRAI US 1998-105982P 19981028; US 1999-429396 19991028
AB US 6274159 B UPAB: 20011206
NOVELTY - An improved pharmaceutical depot comprises a silicone carrier and at least one biologically active and biocompatible glass, glass ceramic or ceramic material (I) comprising silicon dioxide (at least 40 wt.%).
USE - For implantation in human or non-human animal (claimed).
ADVANTAGE - The depot provides prolonged release of the biologically active substance. The coating of (I) bonds directly to soft tissues upon implantation and thus inhibits or prevents the formation of the fibrous **scar** tissue capsule normally associated with the implantation. The presence of healthy tissue surrounding the depot improves the bioavailability of the contained biologically active substance to the vascular system. The **bioactive glass** coating does not impede diffusion of biologically active substance molecules out of the silicone system and into the subject patient's system.
Dwg.0/4
AB . . .
coating of (I) bonds directly to soft tissues upon implantation and thus inhibits or prevents the formation of the fibrous **scar** tissue capsule normally associated with the implantation. The presence of healthy tissue surrounding the depot improves the bioavailability of the contained

biologically active substance to the vascular system. The **bioactive glass** coating does not impede diffusion of biologically active substance molecules out of the silicone system and into the subject patient's. . .

L4 ANSWER 14 OF 30 MEDLINE on STN DUPLICATE 2
AN 2002019847 MEDLINE
DN 21346049 PubMed ID: 11453494
TI Effects of a **bioactive glass** on healing of closed skin **wounds** in dogs.
AU Gillette R L; Swaim S F; Sartin E A; Bradley D M; Coolman S L
CS Scott-Ritchey Research Center, College of Veterinary Medicine, Auburn University, AL 36849, USA.
SO AMERICAN JOURNAL OF VETERINARY RESEARCH, (2001 Jul) 62 (7) 1149-53. Journal code: 0375011. ISSN: 0002-9645.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20020121
Last Updated on STN: 20020121
Entered Medline: 20011207
AB OBJECTIVE: To determine effects of intraincisional **bioactive glass** on healing of sutured skin **wounds** in dogs. ANIMALS: 9 purpose-bred mature female Beagles. PROCEDURE: 3 small matched bilateral (treated vs control) full-thickness truncal skin incisions were made and sutured. Treated **wounds** received intraincisional particulate **bioactive glass** prior to closure. Laser Doppler perfusion imaging was used to assess percentage change in tissue perfusion 3 and 5 days after incision on 1 set of 2 matched wounds, and skin and subcutaneous tissue-cutaneous trunci breaking strength were assessed at 5 days. The other 2 sets of wounds were used for histologic evaluation at 5 and 21 days, respectively. RESULTS: Subjective signs of gross inflammatory reaction were not detected in treated or control wounds. At 5 days, median subcutaneous tissue-cutaneous trunci breaking strength was significantly higher in treated wounds than in control wounds-(188.75 vs 75.00 g). At 5 days, median scores were significantly higher for neutrophils (1 vs 0), macrophages (2 vs 1), and necrosis (1 vs 0) for treated wounds than for control wounds. At 21 days, median macrophage scores were significantly higher for treated wounds than for control wounds (2 vs 1). CONCLUSIONS AND CLINICAL RELEVANCE: Bioactive glass in soft tissues does not cause a gross inflammatory reaction but causes an increase in histologic signs of inflammation, which decreases with time. Bioactive glass has potential for increasing tissue strength. Increased subcutaneous breaking strength could be beneficial in treating wounds in which early healing strength is needed.
TI Effects of a **bioactive glass** on healing of closed skin **wounds** in dogs.
AB OBJECTIVE: To determine effects of intraincisional **bioactive glass** on healing of sutured skin **wounds** in dogs. ANIMALS: 9 purpose-bred mature female Beagles. PROCEDURE: 3 small matched bilateral (treated vs control) full-thickness truncal skin incisions were made and sutured. Treated **wounds** received intraincisional particulate **bioactive glass** prior to closure. Laser Doppler perfusion imaging was used to assess percentage change in tissue perfusion 3 and 5 days. . .

L4 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:898788 CAPLUS
DN 135:170688
TI Pre-treated bioactive composite in rat soft tissue
AU Tirri, T.; Jaakkola, T.; Narhi, T.; Rich, J.; Seppala, J.; Yli-Urpo, A.
CS Biomaterials Research and Institute of Dentistry, University of Turku,

Turku, FIN-20540, Finland
SO Key Engineering Materials (2001), 192-195(Bioceramics), 653-656
CODEN: KEMAEY; ISSN: 1013-9826
PB Trans Tech Publications Ltd.
DT Journal
LA English
AB Effect of in vitro formed calcium phosphate surface on a bioactive composite was studied in rat s.c. tissue. Pre-treatment in simulated body fluid (SBF) for 14 days resulted in the formation of calcium phosphate deposites on the composite surface whereas no formation was obsd. on the copolymer without bioactive glass. Pre-treatment had no effect on short term soft tissue reactions around the copolymer without **bioactive glass** granules whereas the calcium phosphate surface formed on the composite resulted in delayed healing of the surgical **wound.** This may be due to mech. stress caused by rough calcium phosphate surface.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB Effect of in vitro formed calcium phosphate surface on a bioactive composite was studied in rat s.c. tissue. Pre-treatment in simulated body fluid (SBF) for 14 days resulted in the formation of calcium phosphate deposites on the composite surface whereas no formation was obsd. on the copolymer without bioactive glass. Pre-treatment had no effect on short term soft tissue reactions around the copolymer without **bioactive glass** granules whereas the calcium phosphate surface formed on the composite resulted in delayed healing of the surgical **wound.** This may be due to mech. stress caused by rough calcium phosphate surface.

L4 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 2000:790277 CAPLUS
DN 133:340263
TI Anti-inflammatory bioactive glass particulates
IN Greenspan, David C.; Lee, Sean; Walpole, Marlo Tan
PA Usbiomaterials Corporation, USA
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000066086	A1	20001109	WO 2000-US11585	20000428
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1185247	A1	20020313	EP 2000-930226	20000428
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002543108	T2	20021217	JP 2000-614972	20000428
	US 6663878	B1	20031216	US 2000-560475	20000428
PRAI	US 1999-131529P	P	19990429		
	WO 2000-US11585	W	20000428		

AB Compns. and methods for systemically minimizing the inflammatory effects of TNF-.alpha. are disclosed. The compns. include particles of bioactive glass with a particle size <20 mm, alone or in combination with anti-inflammatory agents and other therapeutic agents. The compns. can include an appropriate carrier for oral, i.m., i.p. or i.v. administration. When administered to a patient, the particles bring about elevated levels of IL-6 and do not cause elevated levels of TNF-.alpha.. Ten mice were injected i.p. with 25 mg bioactive glass with a particle size <20 .mu.m in a total vol. of 1 mL (0.5 mL fetal calf serum and 0.5 mL phosphate-buffered saline) with a resulting pH of 9.6. The proinflammatory cytokine TNF-a was not detected in any of the samples. Peritoneal IL-6 concns., however, were increased 25-fold from approx. 80 pg/mL in the carrier-treated mice to over 2000 pg/mL in the bioactive

glass-treated mice. Thus, the bioactive glass was bioactive when administered i.p. The bioactive glass was not directly pro-inflammatory and stimulated the resident cell IL-6 synthesis, which represents a new anti-inflammatory property.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Anesthetics
Anti-inflammatory agents
Anti-ischemic agents
Antirheumatic agents
Antiviral agents
Particle size distribution
Rheumatoid arthritis
Wound healing promoters
(anti-inflammatory **bioactive glass** particles)

L4 ANSWER 17 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AN 2000:190879 CAPLUS
DN 132:227460
TI Anti-inflammatory and antimicrobial uses for bioactive glass compositions
IN Greenspan, David C.; West, Jon K.; Lee, Sean; Meyers, James L.; Diamond, Mason
PA US Biomaterials Corp., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000015167	A1	20000323	WO 1999-US20644	19990910
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2343223	AA	20000323	CA 1999-2343223	19990910
	AU 9962447	A1	20000403	AU 1999-62447	19990910
	EP 1123072	A1	20010816	EP 1999-949609	19990910
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002524203	T2	20020806	JP 2000-569752	19990910
PRAI	US 1998-99725P	P	19980910		
	US 1999-392516	A	19990909		
	WO 1999-US20644	W	19990910		

AB Compns. and methods for treating **wounds** to significantly reduce the healing time, reduce the incidence of **scar** formation, improve the success of skin grafts, reduce the inflammatory response and providing anti-bacterial treatments to a patient in need thereof, that include small non-interlinked particles of **bioactive glass** or highly porous **bioactive glass**, are disclosed. Anti-bacterial solns. derived from bioactive glass, and methods of prepn. and use thereof, are also disclosed. The compns. include non-interlinked particles of bioactive glass, alone or in combination with anti-bacterial agents and/or anti-inflammatory agents. The compns. can include an appropriate carrier for topical administration. Anti-bacterial properties can be imparted to implanted materials, such as prosthetic implants, sutures, stents, screws, plates, tubes, and the like, by incorporating small bioactive glass particles or porous bioactive glass into or onto the implanted materials. Anti-bacterial properties can also

be imparted to devices used for in vitro and ex vivo cell culture by incorporating non-interlinked particles of bioactive glass into the devices. Anti-bacterial compns. derived from aq. exts. of bioactive glass are also disclosed. These compns. can be used, for example, in food prepn., solns. used for cell culture, and buffer solns., such as i.v. solns. A would was treated with a mixt. of particulate noninterlinked bioactive glass with a fine particle size, a topical antibiotic including sulfadiazine, and a petrolatum base carrier. After only 4 days, seepage of the wound was stopped and the surface of the wound appeared dry. If only a topical antibiotic was used to treat a wound in a patient with vasculitis, it would normally take about 2 seeks to stop seepage.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Compns. and methods for treating **wounds** to significantly reduce the healing time, reduce the incidence of **scar** formation, improve the success of skin grafts, reduce the inflammatory response and providing anti-bacterial treatments to a patient in need thereof, that include small non-interlinked particles of **bioactive glass** or highly porous **bioactive glass**, are disclosed. Anti-bacterial solns. derived from bioactive glass, and methods of prepn. and use thereof, are also disclosed. The compns. include non-interlinked particles of bioactive glass, alone or in combination with anti-bacterial agents and/or anti-inflammatory agents. The compns. can include an appropriate carrier for topical administration. Anti-bacterial properties can be imparted to implanted materials, such as prosthetic implants, sutures, stents, screws, plates, tubes, and the like, by incorporating small bioactive glass particles or porous bioactive glass into or onto the implanted materials. Anti-bacterial properties can also be imparted to devices used for in vitro and ex vivo cell culture by incorporating non-interlinked particles of bioactive glass into the devices. Anti-bacterial compns. derived from aq. exts. of bioactive glass are also disclosed. These compns. can be used, for example, in food prepn., solns. used for cell culture, and buffer solns., such as i.v. solns. A would was treated with a mixt. of particulate noninterlinked bioactive glass with a fine particle size, a topical antibiotic including sulfadiazine, and a petrolatum base carrier. After only 4 days, seepage of the wound was stopped and the surface of the wound appeared dry. If only a topical antibiotic was used to treat a wound in a patient with vasculitis, it would normally take about 2 seeks to stop seepage.

ST **wound** treatment **bioactive glass**; antiinflammatory bioactive glass; antimicrobial bioactive glass

IT Anti-inflammatory agents
Antimicrobial agents
Burn
Particle size
Wound healing promoters
(anti-inflammatory and **antimicrobial** uses for **bioactive glass** compns.)

IT Medical goods
(**dressings**; anti-inflammatory and **antimicrobial** uses for **bioactive glass** compns.)

L4 ANSWER 18 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-102473 [11] WPIDS
DNC C2001-029919
TI New silver-containing, sol-gel derived **bioactive glass** compositions for grafting skin or treating **wounds** and **burns**, are particularly useful as bone graft materials.
DC B05 B06 D16 D22 L01
IN BELLANTONE, M; COLEMAN, N J; HENCH, L L
PA (USBI-N) US BIOMATERIALS CORP; (IMCO-N) IMPERIAL COLLEGE INNOVATIONS LTD
CYC 94
PI WO 2000076486 A1 20001221 (200111)* EN 26p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ

NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000054852 A 20010102 (200121)

EP 1196150 A1 20020417 (200233) EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

US 6482444 B1 20021119 (200280)

ADT WO 2000076486 A1 WO 2000-US16207 20000614; AU 2000054852 A AU 2000-54852 20000614; EP 1196150 A1 EP 2000-939832 20000614, WO 2000-US16207 20000614; US 6482444 B1 Provisional US 1999-139014P 19990614, US 2000-593868 20000614

FDT AU 2000054852 A Based on WO 2000076486; EP 1196150 A1 Based on WO 2000076486

PRAI US 1999-139014P 19990614; US 2000-593868 20000614

AB WO 200076486 A UPAB: 20010224

NOVELTY - Composition containing sol-gel derived bioactive glass, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method for treating wounds and burns by contacting a wound with the above composition;

(2) a method for grafting skin by applying the above composition to a graft site and/or the donor tissue; and

(3) a wound or burn dressing comprising a bandage which comprises the above composition in the form of particles, fibers or coatings.

ACTIVITY - Vulnerary; antibacterial. A bioactive gel-glass of the 3 component CaO-P2O5-SiO2 system in which 2% (molar) Ag2O had be introduced by substitution of CaO, was formed (hereafter referred to as 58S7Ag). In tests for its activity against E. coli (MG1655), it was found that 58S7Ag resulted in a cell concentration that was 85% lower than the control after 20 hours of incubation.

MECHANISM OF ACTION - None given.

USE - The compositions are used to graft skin or treat wounds and burns, or they can constitute part of a matrix for use in tissue engineering (all claimed). For example, bacterial growth can be minimized by incorporating the compositions into matrices used in cell culture and tissue engineering applications. They can be used for e.g. bone repair and in biodegradable sutures. They can be incorporated into implanted materials e.g. prosthetic implants, sheets, pins, valves, sutures, stents, screws, plates, and tubes. The fibers and/or particles of the invention can be used to fill voids, including those created during medical procedures. For example, during root canal operations they can be used to fill the hollowed-out teeth temporarily, until they are eventually filled. Other voids which can be filled include those formed surgically during removal of a spleen, ovary, gall bladder or tumor.

ADVANTAGE - An advantage of the compositions is that anti-bacterial properties can also be imparted to devices used for in vitro and ex vivo cell culture when the compositions are incorporated into tissue engineering devices. Since they are prepared using sol-gel methods, processing temperatures are lower, there is good control over the final composition, the surface and pore characteristics of the product can be tailored and sol-gel methods are associated with pure and more homogeneous materials. Alkoxide-derived gel-glasses of the system SiO2-CaO-P2O5 present an expanded compositional range of bioactivity over bioactive glasses made by melt processes. They are capable of dramatically reducing the amount of time required for wound healing to occur, particularly in immuno-compromised patients.

Dwg.0/0

TI New silver-containing, sol-gel derived **bioactive glass** compositions for grafting skin or treating **wounds** and **burns**, are particularly useful as bone graft materials.

TT TT: NEW SILVER CONTAIN SOL GEL DERIVATIVE **BIOACTIVE GLASS** COMPOSITION GRAFT SKIN TREAT **WOUND**

BURN USEFUL BONE GRAFT MATERIAL.

L4 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
AN 1999:483390 CAPLUS
DN 131:106851
TI Bioactive glass treatment of inflammation in skin conditions
IN Lee, Sean; Meyers, James L.
PA Usbiomaterials Corporation, USA
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9937287	A1	19990729	WO 1999-US391	19990122
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6423343	B1	20020723	US 1998-12272	19980123
	AU 9923134	A1	19990809	AU 1999-23134	19990122
	EP 1049457	A1	20001108	EP 1999-903014	19990122
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-12272	A	19980123		
	WO 1999-US391	W	19990122		

AB This invention relates to a method for treating inflammatory symptoms such as burning, redness, itching, swelling and pain which accompany skin disorders other than wounds of the skin. The method comprising topical application of a topical medicinal compn. comprising a non-interlinked particulate bioactive glass mixed with a topical medicinal carrier to the site of the skin disorder.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Anti-inflammatory agents
Antibacterial agents
Dermatitis
Disinfectants
Particle size
Wound healing promoters
(**bioactive glass** treatment of inflammation in skin conditions)

L4 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:636052 CAPLUS
DN 131:253369
TI In vivo gene transfer methods for wound healing
IN Goldstein, Steven A.; Bonadio, Jeffrey
PA The Regents of the University of Michigan, USA
SO U.S., 31 pp., Cont.-in-part of U.S. Ser. No. 316,650.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5962427	A	19991005	US 1996-631334	19960412
	US 5763416	A	19980609	US 1994-199780	19940218
	US 5942496	A	19990824	US 1994-316650	19940930

WO 9522611 A2 19950824 WO 1995-US2251 19950221
WO 9522611 A3 19960208
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UG
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
CA 2251655 AA 19971023 CA 1997-2251655 19970411
WO 9738729 A1 19971023 WO 1997-US7301 19970411
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9728212 A1 19971107 AU 1997-28212 19970411
AU 710386 B2 19990916
EP 892644 A1 19990127 EP 1997-922578 19970411
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
CN 1226835 A 19990825 CN 1997-195326 19970411
RU 2170104 C2 20010710 RU 1998-120477 19970411
JP 2001519767 T2 20011023 JP 1997-537463 19970411
NO 9804729 A 19981214 NO 1998-4729 19981009
KR 2000005376 A 20000125 KR 1998-708098 19981012
PRAI US 1994-199780 A2 19940218
US 1994-316650 A2 19940930
WO 1995-US2251 A2 19950221
US 1996-631334 A 19960412
WO 1997-US7301 W 19970411

AB The present invention relates to an in vivo method for specific targeting and transfer of DNA into mammalian repair cells. The method involves implanting a matrix contg. DNA of interest into a fresh wound site, wherein the matrix acts as a scaffolding that promotes cell growth, and in turn, gene transfer. Repair cells, which normally originate in viable tissue surrounding the wound, proliferate and migrate into the gene activated matrix, wherein they encounter, take up, and express the DNA. Transfected repair cells, therefor act as in situ bioreactors which produce DNA-encoded agents that heal the wound. The transferred DNA may include any DNA encoding a therapeutic protein of interest. The invention further relates to pharmaceutical compns. that may be used in the practice of the invention to transfer the DNA of interest.

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Prosthetic materials and Prosthetics
(**bioactive glass**, use as biocompatible matrix; in vivo gene transfer methods for **wound** healing which involves implanting a solid matrix contg. DNA of interest into a **wound**
)

L4 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:383054 CAPLUS
DN 131:175013
TI Comparison of bioactive glass to demineralized freeze-dried bone allograft in the treatment of intrabony defects around implants in the canine mandible
AU Hall, E. Ellen; Meffert, Roland M.; Hermann, Joachim S.; Mellonig, James T.; Cochran, David L.
CS Department of Periodontics, University of Texas Health Science Center, San Antonio, TX, USA
SO Journal of Periodontology (1999), 70(5), 526-535

CODEN: JOPRAJ; ISSN: 0022-3492
PB American Academy of Periodontology
DT Journal
LA English
AB The purpose of this study was to evaluate and compare the healing of different bone grafting materials adjacent to titanium plasma-sprayed (TPS) endosseous dental implants. Implant osteotomy sites were prepd. and standardized 3-walled intrabony defects (3 mm .times. 5 mm .times. 5 mm) were created at the mesial of each implant site. Thirty-two TPS implants were placed in edentulous mandibular ridges of the 4 dogs. Periodontal dressings were placed in the defect sites so as to create a defect simulating bone loss around an implant. After 3 mo, the periodontal dressing was removed, the defect sites debrided and evaluated for size, and intramarrow penetration performed. The graft materials tested were canine demineralized freeze-dried bone allograft (cDFDBA); bioactive glass granules of a broad size range 90 to 710 .mu. (BRG); and bioactive glass granules of narrow size range 300 to 355 .mu. (NRG). One site on each side of the mandible was not filled and served as a control. Dogs were sacrificed 4 mo after graft placement. Histol., differences in percent bone-to-implant contact in the defect area were obsd. between the treatment groups. CDFDBA>control=BRG=NRG with statistical significance found between cDFDBA and control, but no statistically significant difference between control or either bioactive glass material. When comparing percent bone height fill of the defect in the grafted area, cDFDBA (65.7%) was significantly better than the control (48.9%) with no statistically significant difference between control, broad range bioactive glass (57.3%) and narrow range bioactive glass (56.6%). When total bone area was measured, the percentage of new bone in the grafted area was cDFDBA (42.1%), broad range glass (33.1%) and narrow range glass (22.6%) with significance found between cDFDBA and NRG (P = 0.0102). The content of residual graft particles in soft tissue was significant (P = 0.0304) between cDFDBA (1.4%) and NRG (11.4%) with no significant difference between graft material for residual particle content in bone tissue. The results of this study indicate that percent bone-to-implant contact and percent bone height fill in an intrabony defect around titanium plasma-sprayed implants are statistically significantly higher with the use of DFDBA when compared to bioactive glass material.
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT **Wound** healing
(**bioactive glass** to demineralized freeze-dried bone allograft in treatment of intrabony defects around implants in mandible)

L4 ANSWER 22 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1998-286375 [25] WPIDS
DNN N1998-225154 DNC C1998-088587
TI Composition for accelerated healing of **wounds** and **burns** - comprises **bioactive glass** and topical antibiotics.
DC B05 D22 L01 P32
IN GREENSPAN, D C; WEST, J K
PA (USBI-N) US BIOMATERIALS CORP; (GREE-I) GREENSPAN D C; (WEST-I) WEST J K
CYC 80
PI WO 9811853 A1 19980326 (199825)* EN 23p
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9743566 A 19980414 (199839)
US 5834008 A 19981110 (199901)
CN 1208338 A 19990217 (199926)
EP 1021148 A1 20000726 (200037) EN

R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2001503739 W 20010321 (200122) 18p
US 2001041186 A1 20011115 (200172)
US 6428800 B2 20020806 (200254)
ADT WO 9811853 A1 WO 1997-US16732 19970919; AU 9743566 A AU 1997-43566 19970919; US 5834008 A US 1996-715911 19960919; CN 1208338 A CN 1997-191524 19970919; EP 1021148 A1 EP 1997-941714 19970919, WO 1997-US16732 19970919; JP 2001503739 W WO 1997-US16732 19970919, JP 1998-514928 19970919; US 2001041186 A1 Cont of US 1996-715911 19960919, US 1998-164293 19981001; US 6428800 B2 Cont of US 1996-715911 19960919, US 1998-164293 19981001
FDT AU 9743566 A Based on WO 9811853; EP 1021148 A1 Based on WO 9811853; JP 2001503739 W Based on WO 9811853; US 2001041186 A1 Cont of US 5834008; US 6428800 B2 Cont of US 5834008
PRAI US 1996-715911 19960919; US 1998-164293 19981001
AB WO 9811853 A UPAB: 19980624
Composition for accelerated healing of **wounds** and **burns** comprises particulates of **bioactive glass** (BG) and at least one topical antibiotic (TA). Also claimed are: (A) a method for treating **wounds** and **burns** comprising contacting with BG and TA; (B) a method for grafting skin comprising applying a bioactive particulate glass or a graft of skin then placing the graft; (C) a **wound** or **burn dressing** comprising a **bandage**, a TA and particulate BG; (D) a **wound** or **burn** treatment apparatus comprising TA in a first chamber, a particulate BG in a second chamber and a means for mixing TA and BG; and (E) a method for accelerating the healing of **wounds** or **burns** comprising contacting with particulate BG.
ADVANTAGE - The composition is useful for quickly stabilising a wound or burn and increasing the likelihood that a skin graft will 'take'. The composition dramatically enhances the time required for wound and burn healing.
Dwg.0/5
TI Composition for accelerated healing of **wounds** and **burns** - comprises **bioactive glass** and topical antibiotics.
AB WO 9811853 UPAB: 19980624
Composition for accelerated healing of **wounds** and **burns** comprises particulates of **bioactive glass** (BG) and at least one topical antibiotic (TA). Also claimed are: (A) a method for treating **wounds** and **burns** comprising contacting with BG and TA; (B) a method for grafting skin comprising applying a bioactive particulate glass or a graft of skin then placing the graft; (C) a **wound** or **burn dressing** comprising a **bandage**, a TA and particulate BG; (D) a **wound** or **burn** treatment apparatus comprising TA in a first chamber, a particulate BG in a second chamber and a means for mixing TA and BG; and (E) a method for accelerating the healing of **wounds** or **burns** comprising contacting with particulate BG.
ADVANTAGE - The composition is useful for quickly stabilising a wound or burn and. . .
TT TT: COMPOSITION ACCELERATE HEAL **WOUND BURN** COMPRISE **BIOACTIVE GLASS** TOPICAL ANTIBIOTIC.

L4 ANSWER 23 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:623079 CAPLUS
DN 127:268047
TI Alginate-containing antimicrobial composition for wound healing
IN Gilchrist, Eilidh; Gilchrist, Thomas
PA Giltech Limited, UK; Gilchrist, Eilidh; Gilchrist, Thomas
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9733632	A2	19970918	WO 1997-GB715	19970313
	WO 9733632	A3	19971023		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2247986	AA	19970918	CA 1997-2247986	19970313
	AU 9720329	A1	19971001	AU 1997-20329	19970313
	EP 888139	A2	19990107	EP 1997-908343	19970313
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2000506920	T2	20000606	JP 1997-532381	19970313
PRAI	GB 1996-5247		19960313		
	WO 1997-GB715		19970313		

AB A compn. comprising an admixt. of a finely divided alginate (or a salt or deriv. thereof) together with a finely divided carrier material is provided. The compn. overcomes the problems assocd. with applying gel-forming alginates to a body surface without formation of a clumpy paste that leads to local irritation. An admixt. of sodium alginate and a water-sol. glass carrier material is preferred. Optionally, the alginate and carrier material each have a particle size of less than 150 .mu.m diam. and are present in a wt. ratio of 20:80 to 80:20. The presence of the carrier aids even gel formation and also promotes wound healing. A mixt. contg. controlled-release glass/silver and sodium alginate (50:50) was prepd. and 2 mg of the powder was implanted in muscle fibers of rats. No sign of gross inflammation was seen at the implant site after 14 days when animals were sacrificed.

ST **antimicrobial wound** healing alginate **glass** silver

IT **Glass**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alginate-contg. **antimicrobial** compn. for **wound** healing)

L4 ANSWER 24 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1998-041752 [04] WPIDS
CR 1999-120455 [10]
DNN N1998-033468 DNC C1998-013903
TI Fluid composition adapted for e.g. repair and replacement of hard or soft tissue - comprises homogeneous suspension of bio-active and bio-compatible glass particulate in aqueous solution of dextran or dextran derivative.
DC B06 D21 D22 L01 P32 P73
IN BATICH, C; HENCH, L L; LA TORRE, G; TOREKI, W; WEST, J K; WILSON, J; LATORRE, G
PA (UYFL) UNIV FLORIDA RES FOUND INC; (UYFL) UNIV FLORIDA RES FOUND
CYC 75

PI	WO 9745070	A1	19971204 (199804)*	EN 14p
	RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG			
	W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN			
	AU 9730755	A	19980105 (199821)	
	US 5840290	A	19981124 (199903)	
	CN 1226149	A	19990818 (199951)	
	EP 961594	A1	19991208 (200002)	EN
	R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE			
	JP 2000511084 W		20000829 (200045)	12p

ADT WO 9745070 A1 WO 1997-US8655 19970529; AU 9730755 A AU 1997-30755 19970529; US 5840290 A US 1996-657713 19960530; CN 1226149 A CN 1997-196844 19970529; EP 961594 A1 EP 1997-925689 19970529, WO 1997-US8655 19970529; JP 2000511084 W JP 1997-542705 19970529, WO 1997-US8655 19970529
FDT AU 9730755 A Based on WO 9745070; EP 961594 A1 Based on WO 9745070; JP 2000511084 W Based on WO 9745070
PRAI US 1996-657713 19960530
AB WO 9745070 A UPAB: 20000918
Fluid composition (I), particularly adapted for the repair, replacement, reconfiguration, reconstruction or augmentation of selected soft tissue and/or hard tissue (bone) anatomic structures, capable of injection via a surgical needle into an animal comprises a homogeneous suspension of bio-active and bio-compatible glass particulate composition of particle size 250-90 mu m in an aqueous solution of dextrans or of dextran derivatives of average molecular weight 1 multiply 104-2 multiply 106 Daltons and optionally one or more preservative, colouring, flow enhancing or suspension enhancing agents.

USE - (I) is used for the repair of soft tissue or hard bone of mammals, especially humans (claimed). They are used to treat particularly vocal cords, periurethral tissue, maxilla, mandible, temporomandibular joint, chin, zygomatic arch, nose, ear, tooth root canal, tooth pulp caps, dental restoration, defects in bone, vertebrae spaces, articulating joints, urethra and subcutaneous and intradermal soft tissues.

ADVANTAGE - The **bioactive glass** materials form strong adherent bonds comprising a thin layer of collagen at a glass/soft tissue interface upon injection in the animal, form strong adherent bonds comprising a layer of collagen not more than 1-3 fibres thick, become encapsulated after injection in the animal with a collagen layer attached by chemical and mechanical bonding to the bioactive surface and do not, after injection, contribute to the formation of excess **scar** tissue, giant cells or acute inflammatory cells and do not cause long lasting foreign body reactions. The compositions can be injected using a standard medical syringe and needle and after injection the dextran derivatives begin to degrade and be removed from the mixture by phagocytosis. Degradation and removal is complete within 2-20 days. The **bioactive glass** particles bond to the soft tissue sites and create a long-lasting augmentation of the tissue.

Dwg.0/0

AB . . .
dental restoration, defects in bone, vertebrae spaces, articulating joints, urethra and subcutaneous and intradermal soft tissues.

ADVANTAGE - The **bioactive glass** materials form strong adherent bonds comprising a thin layer of collagen at a glass/soft tissue interface upon injection in the. . . by chemical and mechanical bonding to the bioactive surface and do not, after injection, contribute to the formation of excess **scar** tissue, giant cells or acute inflammatory cells and do not cause long lasting foreign body reactions. The compositions can be. . . begin to degrade and be removed from the mixture by phagocytosis. Degradation and removal is complete within 2-20 days. The **bioactive glass** particles bond to the soft tissue sites and create a long-lasting augmentation of the tissue.

Dwg.0/0

L4 ANSWER 25 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1997-221596 [20] WPIDS
DNC C1997-070942
TI Production of an antibacterial agent - by mixing metal or metal compound with glass composition, then burning at specified temperature.
DC D22 L01 L02
PA (INAE) INAX KK
CYC 1
PI JP 09067142 A 19970311 (199720)* 4p
ADT JP 09067142 A JP 1995-246764 19950830
PRAI JP 1995-246764 19950830

AB JP 09067142 A UPAB: 19970606
A metal or a metal compound having antibacterial property is mixed with a glass composition and burned at 700-1200 o.C.
USE - The antibacterial agent is used for producing antibacterial tiles etc.
ADVANTAGE - The metal antibacterial component (silver ion) is supported on glass composition uniformly under good condition, and silver ion is not eluted from the product.
Dwg.0/0
TT TT: PRODUCE **ANTIBACTERIAL** AGENT MIX METAL METAL COMPOUND **GLASS** COMPOSITION **BURN** SPECIFIED TEMPERATURE.

L4 ANSWER 26 OF 30 MEDLINE on STN DUPLICATE 6
AN 1998071287 MEDLINE
DN 98071287 PubMed ID: 9407396
TI Comparison of porous bone mineral and biologically active glass in critical-sized defects.
CM Comment in: J Periodontol. 1998 Nov;69(11):1312-4
AU Schmitt J M; Buck D C; Joh S P; Lynch S E; Hollinger J O
CS Northwest Wound Healing Center, Division of Plastic and Reconstructive Surgery, Oregon Health Sciences University, Portland, USA.
SO JOURNAL OF PERIODONTOLOGY, (1997 Nov) 68 (11) 1043-53.
Journal code: 8000345. ISSN: 0022-3492.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals; Priority Journals; Space Life Sciences
EM 199801
ED Entered STN: 19980129
Last Updated on STN: 20000303
Entered Medline: 19980113
AB Several materials have been proposed as therapies to augment alveolar bone and to promote periodontal regeneration. However, there are an insufficient number of studies that effectively evaluated these therapies. Consequently, the purpose of this study was to compare bone regeneration promoted by porous bone mineral and biologically active glass. Unilateral critical-sized defects (CSDs) were prepared in the radii of 24 rabbits, divided evenly between 2 time periods (4 and 8 weeks) and between 2 treatment groups (porous bone mineral and biologically active glass). Evaluations consisted of clinical examinations, standardized radiography at baseline and every 2 weeks thereafter, as well as histology and histomorphometry. Data were analyzed by an unpaired Student t-test with significance established at P < or = 0.05. We determined that CSDs treated with porous bone mineral were significantly more radiopaque than biologically active glass-treated sites at both 4 and 8 weeks. Moreover, the amount of new bone was significantly greater at both 4 and 8 weeks in the porous bone mineral groups than in the biologically active glass groups. We concluded that in the rabbit radius CSD **wound** model, porous bone mineral appears to be more effective than **biologically active glass** in regenerating bone.
AB . . . the porous bone mineral groups than in the biologically active glass groups. We concluded that in the rabbit radius CSD **wound** model, porous bone mineral appears to be more effective than **biologically active glass** in regenerating bone.

L4 ANSWER 27 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-235759 [24] WPIDS
DNC C1996-074804
TI Glass melting furnace for glass contg. antibacterial silver ions - composed of electroforming or burned refractory contg. dispersed iron oxide as inner wall of tank..
DC D22 L01
PA (NIPG) NIPPON SHEET GLASS CO LTD

CYC 1
PI JP 08091847 A 19960409 (199624)* 4p
ADT JP 08091847 A JP 1994-232821 19940928
PRAI JP 1994-232821 19940928
AB JP 08091847 A UPAB: 19960618
An electroforming refractory contg. dispersed Fe2O3 of up to 0.3 wt.% or a burned refractory contg. uniformly dispersed Fe2O3 of up to 0.15 wt.% is used as the inner wall of the glass melting tank.
USE - Used for producing glass contg. antibacterial silver ions.
ADVANTAGE - The electroforming refractory evolves no oxidn.-redn. reaction. The resulting refractory deposits no silver colloid or metallic silvers yet is stably dissolved as a silver ion in molten glass to yield melting glass having an antibacterial action.
Dwg.0/0
TT TT: **GLASS** MELT FURNACE **GLASS** CONTAIN **ANTIBACTERIAL** SILVER ION COMPOSE ELECTROFORMING **BURN** REFRACTORY CONTAIN DISPERSE IRON OXIDE INNER WALL TANK.

L4 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:144090 CAPLUS
DN 120:144090
TI Preparation and studies of bioactive glass-ceramic containing Zn
AU Guo, Lipid; Li, Lihua; Lei, Jiaheng; Mu, Shanbin
CS Dep. Mater. Eng., Wuhan Univ. Technol., Wuhan, Peop. Rep. China
SO Wuhan Gongye Daxue Xuebao (1993), 15(1), 27-33
CODEN: WGDXEY; ISSN: 1000-2405
DT Journal
LA Chinese
AB In present work, a new kind of **bioactive glass**-ceramic for artificial bones is prepd. with ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can help **wound** healing and increase the immunity of human bodies by introducing ZnO. The compns. of glasses and melting condition, crystg. characteristics and heat treatment technique, effect of Zn content on properties of material and biocompatibility and bioactivity of material were investigated systematically. The exptl. results indicated that material, with oxyapatite and wollastonite as main crystal phases, has high mech. strength (bending strength 170 MPa, compressive strength 500 MPa) and fine chem. stability, Zn2+ ions released slowly out of glass-ceramic sample in simulated physiol. soln., which was beneficial to wound healing. The animal expt. proved that material has good biocompatibility and bioactive.
AB In present work, a new kind of **bioactive glass**-ceramic for artificial bones is prepd. with ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can help **wound** healing and increase the immunity of human bodies by introducing ZnO. The compns. of glasses and melting condition, crystg. characteristics and heat treatment technique, effect of Zn content on properties of material and biocompatibility and bioactivity of material were investigated systematically. The exptl. results indicated that material, with oxyapatite and wollastonite as main crystal phases, has high mech. strength (bending strength 170 MPa, compressive strength 500 MPa) and fine chem. stability, Zn2+ ions released slowly out of glass-ceramic sample in simulated physiol. soln., which was beneficial to wound healing. The animal expt. proved that material has good biocompatibility and bioactive.
IT **Wound** healing
(**bioactive glass**-ceramic contg. Zn for artificial bone in relation to)

L4 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:172377 CAPLUS
DN 124:270473
TI Preparation and study of bioactive glass-ceramics containing Zn
AU Guo, Liping; Lei, Jiaheng; Li, Lihua; Mu, Shanbin
CS Dpte. Material Engineering, Wuhan University Technology, Peop. Rep. China

SO Journal of Wuhan University of Technology, Materials Science Edition (1993), 8(3), 14-23
CODEN: JWUTE8; ISSN: 1000-2413
PB Wuhan University of Technology
DT Journal
LA English
AB In present work, a new kind of **bioactive glass**-ceramic material for artificial bone was prepd. in the ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can promote the **wounds** to heal and increase the immunity of human bodies by introducing a small amt. of ZnO. The compns. of the glasses and melting conditions, crystn. characteristics and heat treatment technique, the effects of Zn content on properties, bioactivity and biocompatibility of glass-ceramic material were investigated. The material, with wollastonite (.beta.-CaSiO3) and hydroxyapatite (Ca10(PO4)6O) as main crystal phases, has a relatively high mech. strength (bending strength 170 MPa, compressive strength 500 MPa, resp.) and fine chem. stability. Zn ions released slowly out of glass-ceramic sample in a simulated physiol. soln., which is beneficial to healing of wounds. The animal tests showed that the material has good bioactivity and biocompatibility.
AB In present work, a new kind of **bioactive glass**-ceramic material for artificial bone was prepd. in the ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can promote the **wounds** to heal and increase the immunity of human bodies by introducing a small amt. of ZnO. The compns. of the glasses and melting conditions, crystn. characteristics and heat treatment technique, the effects of Zn content on properties, bioactivity and biocompatibility of glass-ceramic material were investigated. The material, with wollastonite (.beta.-CaSiO3) and hydroxyapatite (Ca10(PO4)6O) as main crystal phases, has a relatively high mech. strength (bending strength 170 MPa, compressive strength 500 MPa, resp.) and fine chem. stability. Zn ions released slowly out of glass-ceramic sample in a simulated physiol. soln., which is beneficial to healing of wounds. The animal tests showed that the material has good bioactivity and biocompatibility.

L4 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
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TI Manufacture of glass microspheres with bacteriostatic properties, and their use in fluidized beds for burn patients
IN Delzant, Marcel
PA Glaverbel S. A., Belg.
SO Ger. Offen., 5 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	GB 2209523	B2	19910821		
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AB The title microspheres are coated with bacteriostatic proteins, e.g., lactoferrin, which is covalently bonded to the glass by means of coupling agents. Alkali-lime glass microspheres (diam. 65-106 .mu.m, av. 85 .mu.m) were treated with (.gamma.-glycidoxypropyl)trimethoxysilane (0.1 cm3 per kg microspheres) and then with 10% aq. bovine lactoferrin at pH 4-5 to give microspheres bearing 0.01 wt.% of active product. The bacteriostatic activity of the microspheres was equiv. to that of the free lactoferrin.

IT **Bactericides**, Disinfectants, and Antiseptics
(enzymes, **glass** microspheres treated with, for fluidized beds for **burn** patients)